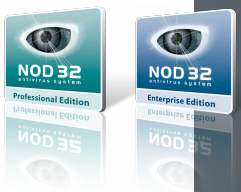


we protect digital worlds

# NOD32 antivirus system

## NOD32 for Windows Administrator

## NOD32 Remote Administrator

*User's guide*

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## INTRODUCTION

The NOD32 Antivirus system offers a wide range of tools, which make running and managing both smaller and larger company networks easier.

Even the **multi-license NOD32 for Windows** offers the basic network services. Especially a feature called Mirror, which serves to decrease traffic across your Internet LAN connection. Client workstations, with NOD32 installed, will not download updates directly from the manufacturer (Eset company), but from a local update server, which is located in the same LAN. Using a Mirror, you can configure all NOD32 system settings. Thus you can reconfigure NOD32 settings on all workstations "en bloc".

In addition, NOD32 for Windows itself, or the control module *NOD32 Control Center,* can inform the administrator about virus or other problems on workstations via electronic mail or Windows Messenger.

**NOD32 Enterprise Edition** offers much more. It includes NOD32 for Windows and NOD32 Remote Administrator.

*NOD32 Remote Administrator* serves to manage the NOD32 antivirus system in large computer networks. Thanks to *NOD32 Remote Administrator,* you can get a global overview of the NOD32 antivirus system activity on network workstations together with information about eventual infiltration. The information retrieved from the workstations (from the NOD32 for Windows, or the *NOD32 Control Center* module) are stored centrally on the server (*NOD32 Remote Administrator – RAS*), and the network administrator can access them at once using the user-friendly graphical interface of the console (*NOD32 Remote Administrator Console – RAC*). The communication takes place also in the opposite direction and administrator can thus immediately react to newly-created situations, and assign tasks to the NOD32 Antivirus System on the client workstations.

Because a lot of information, which may be difficult to remember is to follow, at the end of the manual you can find a summary of the most important issues.

Chapter 1:

# Basic network features of NOD32 for Windows

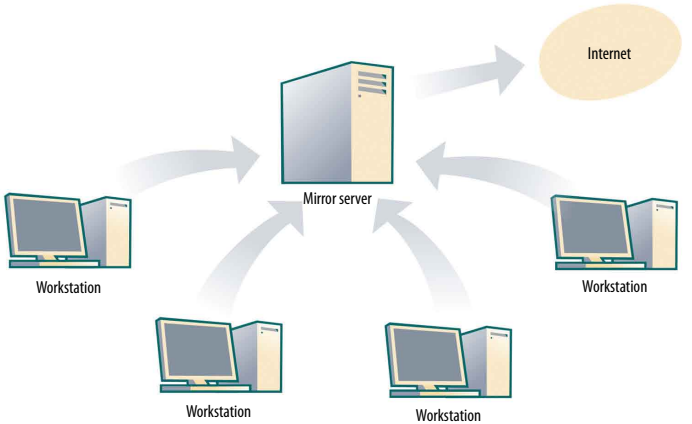
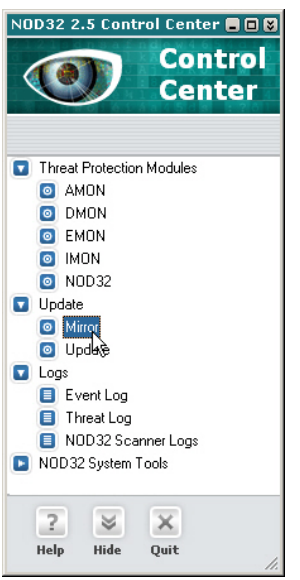



**Figure 1 Principle of a Mirror: The company server downloads updates from the Internet, and workstations update from this local server. The Mirror thus decreases traffic across your Internet connection, because the workstations download update files from the local server, and not from the Internet. Update process is initialized by Mirror server (Update from the Internet) and workstations (update from Mirror Server) in regular intervals.**

## Mirror




Mirror is available in two versions:

- mirror as a shared network folder
- mirror as an HTTP server

and its setup is available from *NOD32 Control Center*.

When you create the Mirror as an HTTP server, one PC serves for downloading updates from Eset`s servers, and as a NOD32 update server for the other workstations in the LAN at the same time. This version is easier to configure and is not limited by the number of licenses of the file server, which is required by the first version for access to the shared folder.

HTTP Server is a direct part of NOD32 2.5 administrator version and by default runs on port 8081.

If the Mirror is created as a shared folder, then its principle lies in distribution of updates across the network, using a shared network folder. In contrast to the first method (HTTP server), a computer creating a Mirror does not have to be a server, to which the other workstations connect to download updates at the same time.

## Model installation of Mirror as an HTTP server

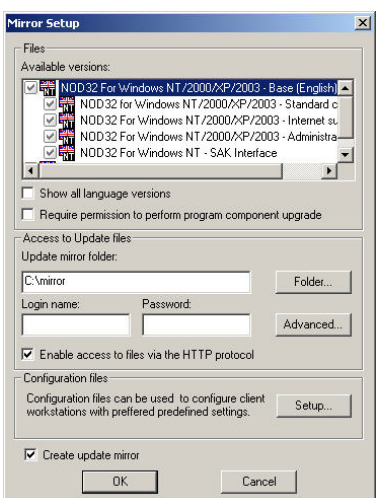
1. In the NOD32 Control Center choose *Mirror* and on the right, click on the Setup button.
2. Check Create update and also Enable access to files to perform program component upgrade. In the upper part, choose those versions of NOD32, for which updates will be downloaded from the Internet. **All versions that will be running on the workstations should be checked.** Into the dialog box Update mirror folder, enter a path to the folder, where the update files will be downloaded and later presented by the HTTP server. For example the path can be *C:\OD32LAN*.
3. Click *OK* to save your settings.
4. In order not to wait for the next automatic update (and thus for the folder *C:\WOD32LAN* to be filled in), click on the *Update now* button in the Update dialog window.

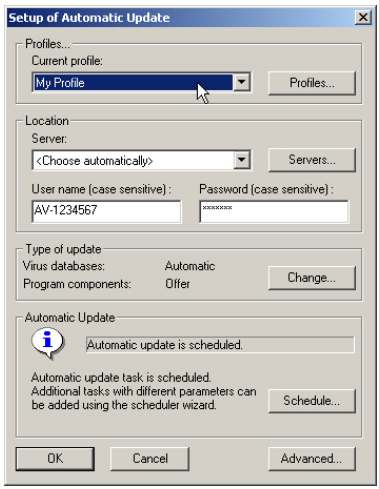
Now server setup is completed. We will proceed to the workstations.

5. For NOD32 on workstations, just change the update server URL. In most cases it means from Choose automatically to *http:// IP_address_of_my_server:8081*. This is done in NOD32 Control Center: click on the Update button, and then choose Setup.
6. When there, click on the Servers button and add a new server, namely *http: //IP_address_of_my_server:8081*. Save the changes by clicking OK and set this server in the previous dialog window.

Now the configuration of workstations is completed too.

Now click on the *Update now* button in the Update tab to check whether it is set up correctly.




## Model installation of Mirror as a shared folder

The whole process of installation is similar to the previous case. Some differences can be found in the steps 2, 5, and 6, the others are identical.

- **Step 2:**

Check the Create update mirror checkbox. In the upper part choose those versions of NOD32, for which updates will be downloaded from the Internet. **All versions that will be running on the workstations should be**

**checked.** Into the Update mirror folder enter a path to the directory, where updates will be downloaded – i.e. a path to the shared network folder – Mirror – and enter username and password of user with a right to read, write and browse.

When entering a path, please use the UNC path. Let's assume that the shared folder is named *NOD32NET* and is located on the MAIN server. Then enter the path in this form: *\\MAIN\NOD32NET*.

**WARNING! Please, pay attention when entering "username" and "password". See below chapter for details.**

- **Step 5:**

Just change the URL of update server on NOD32 on the workstations. Again, please be careful when entering username with Windows NT / 2000 / XP / 2003. Open the NOD32 Control Center, then choose *Update*, click on the Setup button, and enter the username.

Click on the Servers button to add a new update server. According to the previous example, enter *\\MAIN\NOD32NET*. Save the changes and return to the Update setup window and choose it from the roll down menu.

**WARNING! Please, pay attention when entering "username" and "password". See below chapter for details.**

Click OK in the bottom section to save the settings. To make sure that it is set up correctly, click on the *Update Now* button in the Update dialog window.

If it is set up correctly, you should not be asked for username and password, and, naturally, no error messages should be displayed.

Now click on *Update now* in the Update tab to check whether it is set up correctly.

## How to transfer configuration via Mirror.

Using a local update server – Mirror – you can also distribute a configuration for NOD32, by which the workstations will be configured at the next attempt to update.

In order to automatically distribute a configuration,

- set update server on the workstations to *http://IP_address_of_your_server:8081* (if it is the version with an HTTP server) or to *\\MAIN\NOD32NET* (if it is the version with a shared folder)
- place the configuration XML file on the server.

The configuration itself is created on the same PC where the mirror is created. Click on the *Mirror* button in the *Update* section in the NOD32 Control Center, and then click on the *Setup* button. In the *Mirror Setup* dialog window, click on *Setup in Configuration files*. After clicking on the *Setup* button, select *Add,* then *New* and create a new configuration file. Save the new configuration file anywhere on the local disk, EXCEPT for the folder with the Mirror. After this is done, the application *NOD32 Configuration Editor* is launched (see below).

After required changes are made, save them by clicking on the diskette in the upper part of the window. Then just close the window and click OK to return to the NOD32 Control Center. Now, by clicking on the Update button in the Mirror for local updates section the configuration file will be generated in the folder with the Mirror. **The presence of the configuration file in the update folder / mirror will ensure, that the workstations will, besides downloading updates, apply this confirmation also.**

## Access usernames and passwords

Please pay attention when filling in the username and password dialog boxes in the *Update setup* dialog window before updating from the mirror (or before creating the mirror).

The NOD32 update process runs at the service level, and a currently logged in user cannot affect this situation (even if he/she has access to the folder with the Mirror).

So in case of MS Windows NT / 2000 / XP / 2003 operating system fill in the "name" dialog box this way:

*DOMAIN\USER*

or

*WORKGROUP\USER*

under Novell system, just put *USER*.

Of course we must not forget the password. *LOGIN NAME* is a name of the user with read-only rights to the folder with the mirror (if the user creates the mirror, then also to write).

We recommend creating a new special account for this purpose (e. g. noduser) and using it for downloading updates (*company\noduser* etc.)

## NOD32 Program component upgrades

Besides the virus signatures database update, a license also includes program updates – program component upgrades, which require a restart of the operating system and bring a lot of new features and improvements to NOD32 (it is an upgrade to a completely new version, e. g. from 2.0 to 2.5). Choose *"Require permission to perform program component upgrade"* in the Mirror Setup window to ensure that the program component upgrade will not be applied to a local update server immediately it is available on the servers of the Eset company. NOD32 on the workstations will remain in the current version, and the workstations will only accept virus signatures updates from the mirror.This feature is suitable if the administrator tests new program updates before applying them to all workstations in the network.

If "Require permission to perform program component upgrade" is active and there is a newer program update available than the one saved in the Mirror directory, the "Components Update" in NOD32 Control Center > Mirror will be active. By clicking on this button the administrator agrees that the program update will be available to the workstations via Mirror.

## Installation of NOD32 for Windows on workstations

The above-mentioned configuration file can serve also for a new installation of NOD32 according to the requested setup. Place the configuration file into the folder with the installation of NOD32, i.e. where *SETUP.EXE* is located and name the configuration file *NOD32.XML*.

It may be useful to remember the parameter */SILENTMODE* connected with SETUP.EXE (i.e. *SETUP.EXE /SILENTMODE*), which installs NOD32 in silent mode – no dialog window will be displayed during installation.

Now there follows a list of all useful parameters that can be used during installation of NOD32:

**/SILENTMODE** – a mode without dialog windows – silent installation.

**/UNINSTALL** – uninstall of existing installation.

**/FORCEOLD** – will also install over newer version.

**/CFG=** – switch with a configuration name (if this parameter is not present, NOD32.XML is used by default).

**/SETTINGS=** – name with obligatory SETUP.XML file (entered only if SETUP.XML is not present in the installation folder, or has a different name).

**/TEST** – if the installation is launched with this parameter, NSETUP.LOG is created, where the installation progress is described in details. Here you can exact reasons of eventual problem when installing.

**/REBOOT** – after a silent installation is complete, the PC is not restarted by default, even though it may be required. Using this parameter will switch the restart option on.

**/SHOWRESTART** – if this parameter is combined with the previous one, confirmation for restart will be required.

**/PWD=** – entering password for uninstall. This is important in case a current version of NOD32 is protected by a password, and the administrator intends to reinstall in silent mode.

**/NUP=** – if the value of this parameter is set (name of the file with component), the installation does not require SETUP.XML for the whole installation, but you can install only one component.

**/INSTMFC** – this parameter turns on installation of MFC libraries – if it is necessary – without asking. The MFC library must be located in the same directory as SETUP.EXE. The installation program will check whether there are newer libraries in the system (or none) and will proceed according to the verdict (e. g. install).

The switches with "=" require entering of a thread. It can be put into quote marks, but does not have to. Quote marks are obligatory only if the thread contains spaces.

Should this version of the installation be applied, for example using logon scripts, then make sure that the installation will not be repeated by every start of the logon script. SETUP.EXE can not decide by itself whether there is NOD32 already installed on the workstation.

Such control can be provided for example with this batch file (.BAT):

```
@echo off
IF EXIST "c:\program files\eset\nod32.exe" GOTO end
echo Installing NOD32...
\\server\nod32\setup.exe /SILENTMODE /REBOOT /cfg=\\
server\cfg\konfig01.xml
GOTO end2
:end
echo NOD32 already installed...
GOTO end3
:end2
echo Completed...
:end3
```

## Configuration editor

Using the Configuration editor, you can create a configuration XML file, according to which, NOD32 on workstations and servers will be set up, or scan the computers using its configuration. All of the features are arranged in a tree structure. The small icons in front of each feature are very important. At the moment when the configuration will be applied on the target PC, the setting marked by a "grey" symbol will be left unchanged on the target PC. However, all items marked by blue symbols: will be changed on the target PC.

Thus you can easily reconfigure chosen features on all computers at once and leave the other settings unchanged.

## Some of the key settings of the NOD32 configuration

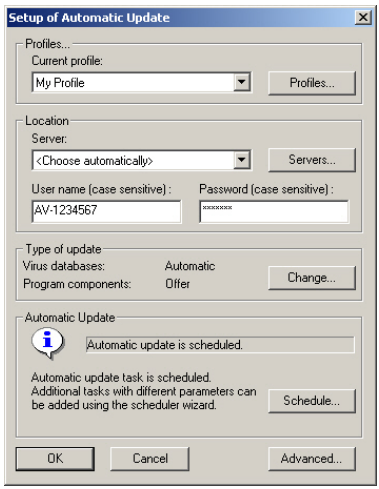
Now there follows a list of some key configuration options (other important information can be found in the Profiles chapter).

Path:

- *General / Settings / General / Silent Mode*
  If the Silent mode is turned on, no messages about successful updates and so on, will be displayed. This setting will not affect behavior of NOD32 in case an infiltration was found.
- *General / Settings / General / Lock Settings and Password to unlock*
  These settings protect access to the NOD32 configuration options by the workstation user.
- *General / Settings / Remote Administration*
  Very important in case NOD32 Remote Administrator is also installed. Then it is important to enter the IP address (or DNS name) of the RA server, by which the client workstations communicate (you can leave default settings for Server port and Interval between connecting to RA Server) and allow remote administration.
- *AMON / Settings / Security / Start AMON automatically*
  We recommend leaving the default setting. Change it only if you are not sure, whether there is another antivirus system installed. It is not recommended to have two AV's installed and running in real-time on one PC (it can lead to conflicts). These settings can be changed also in the NOD32 Control Center > Threat-

Protection Modules > AMON > Setup > Security tab > Enable automatic startup of AMON.

- *AMON / Settings / Enabled*
  AMON – the resident shield will watch over the manipulation of files (YES), or will be running only in the background and will not watch over the manipulation (NO).
- *IMON / Settings / Register IMON to the system*
  We recommend setting this option to YES, if it is a workstation, and to NO, if NOD32 for Windows will be installed on a server, or a PC, where some other services are running.
  These settings can be changed also in the menu NOD32 Control Center > Threat Protection Modules > IMON > Quit.
- *IMON / Settings / Enabled*
  IMON – the Internet monitor – will control communication (YES), or will be running only in the background and will not watch over the communication (NO).
- *Update / Profile / Settings / Update server*
  This option sets a path to the server, which will be serving as an update server. By default it is set to AUTOSELECT - NOD32 automatically chooses one of the Eset company update servers.
- *Update / Profile / Settings / Username and Password*
  Username and password are authorization data to the above mentioned server. In case NOD32 is updated directly from an Internet update server of the Eset Company, then enter the username and password you received when you purchased the NOD32 license. If you use your own update server (see chapter about "Mirror"), enter the username and password for this update server (also described in a separate chapter).
- *General / Settings / ThreatSense.Net*
  This system allows sending of suspicious files (that were identified by heuristic analysis as probably being infected by an unknown virus) from client to our virus lab. We recommend considering this feature, especially the option that decides whether the suspicious files will be sent automatically, after user's consent or not at all..




## Profiles – Scheduler/Planner

NOD32 for Windows allows defining "groups" of settings – *profiles* – in certain parts of the program, especially in *update profiles and scanning profiles*. You may, for example, want to have one profile p roviding updates from a local server and another one, providing updates directly from the Internet. The same applies to the scanning profiles – one profile would test local disks without scanning of archives, and another would scan network drives including archives.

The profiles are interconnected with *scheduled tasks (NOD32 Control Center / NOD32 System Tools / Scheduler/Planner)*. For example, after standard installation of NOD32 for Windows, a profile is created called *My Profile,* which as one of its tasks sets automatic update for every hour.

Please pay attention when setting compatibility of the profiles and the scheduled tasks, and please also be careful when defining your own profiles – check whether the profiles are really launched automatically.

If there's no automatic update scheduled, it is shown in the Setup of Automatic Update tab, as can be seen in the screenshot.

Chapter 2:

# Centralized management – NOD32 Remote Administrator

## Remote Administrator

*NOD32 Remote Administrator* serves to manage the NOD32 antivirus system in large computer networks. Thanks to *NOD32 Remote Administrator*, you can get a global overview of the NOD32 antivirus system activity on network workstations together with information about any eventual infiltration. The information retrieved from workstations (from NOD32 for Windows, or the *NOD32 Control Center* module) are stored centrally on the server (*NOD32 Remote Administrator – RAS*), and the network administrator can access them at once using the user-friendly graphical interface of the console (*NOD32 Remote Administrator Console – RAC*). The communication takes place also in the opposite direction and the administrator can thus immediately react to newly-created situations, and assign tasks to the NOD32 Antivirus System on the client workstations.

## Installation of RAS and RAC, basic configuration

*NOD32 Remote Administrator Server* (from now on only referred to as *RAS*) – is an application which communicates with NOD32 on workstations (or with *NOD32 Control Center*), gathers information about them and sends them to the other application – *NOD32 Remote Administrator Console (RAC)*. It is advised to install RAS on a PC that is running all the time and that is "visible" for the workstations with NOD32 on the TCP/IP level, but also for the PCs, from which the administrator will connect using the console (RAC). The product must be installed on the MS Windows NT based operating system (NT4, 2000, XP, 2003).

RAS is installed by running the file *rasrvnten.exe*. RAS is installed as a service.

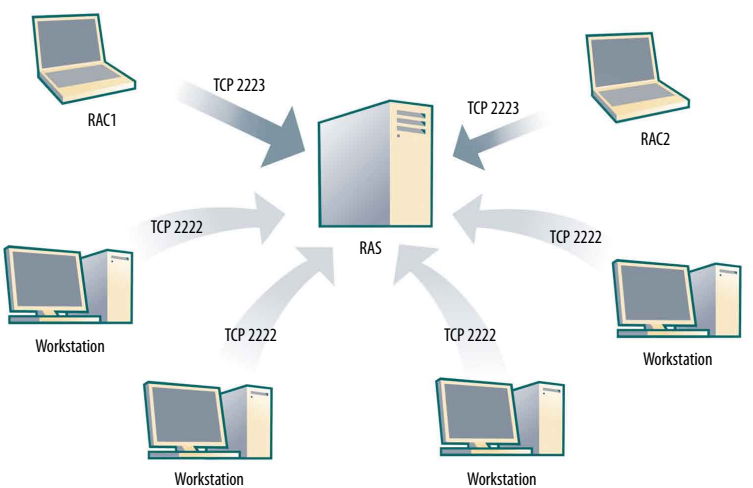



**Figure 2: Simple RA connection diagram. The real situation can be much more complex. There can be also a separate mirror server – though usually RA server and Mirror would be located on one computer/server. The connection to RAS is initiated by the workstations in preset intervals.**

You can control the service manually using these commands:

NOD32RA.EXE –INSTALLSERVICE

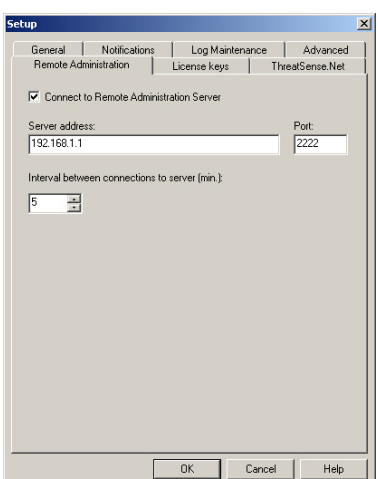
NOD32RA.EXE –REMOVESERVICE

During installation, the program will ask for the location of the license key, i.e. of the file called nod32.lic, which contains information about its owner, its expiry date as well as about the number of users, for which the RAS was purchased. You can copy the key later into the directory *C:\Program Files\Eset\RA\Server* (it is activated after restarting the NOD32 Remote Administration Server service). Information included in the key can be seen in *Help / About / Server Options* after connecting to the server with the console.

During the **expert** installation, the name of the server, under which workstations in the network recognize it, is required. If not stated otherwise, the server is presented under the name of the PC where it is located.

Please pay attention when entering the name of the server. This name is used for example by *nod32installer* providing remote installation of NOD32 on workstations. If RAS would not have been visible under this name, the remote installation could fail.

We recommend entering the DNS name of the server.




Also NOD32 for Windows Antivirus System is supposed to be running on the same PC – connected to the Internet. Its virus signature database serves as a detector of the most recent for the databases present on the workstation.

*NOD32 Remote Administrator Console* (from now on only referred to as *RAC*) serves for accessing the information retrieved by RAS from the workstations with the NOD32 installation. It is advised to install RAC on workstations, from which the administrator will access RAS.

The installation begins after running the file *raconsnten.exe* (console for Windows NT/2000/XP/2003) or *racons98en.exe* (console for Windows 95/98/ME).

To complete the setup procedure, configure also the workstations with NOD32 for Windows, which will communicate with RAS. Remote administration therefore must be enabled on the workstations with NOD32 for Windows in the menu *NOD32 Control Center / NOD32 System Tools / NOD32 System Setup / Setup – Remote Administration*. Enter the name or IP address of the RA server, or change the interval between connections (5 minutes by default). Communication between NOD32 (or *NOD 32 Control Center*) on the workstation and RAS takes place by default on TCP port 2222.

## Connecting to server using console interface

The console connects to RAS after entering the RAS IP address in menu *Tools / Console Options* (the *Connection* tab) and clicking on the *Connect* button. Select the option *Connect to selected server on the console startup* provides automatic connection to selected RAS after starting the console.

Enter your access data to chosen RAS during connection. By default the password dialog box is blank – it is advised to define your password in the menu *File / Change Password…*

The console can remember passwords – check the *Remember password* checkbox during entering – but it is recommended to leave this option disabled for security reasons. If it is already enabled and you do not want the passwords to be filled in automatically by the console, then check *File / Clear Cached Passwords*.

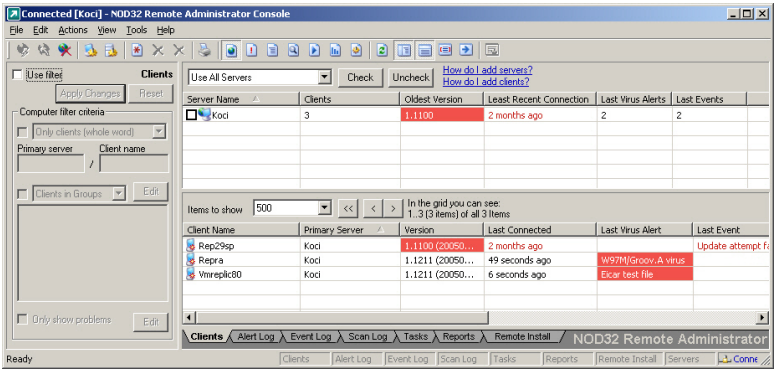



**Figure 3. The main screen of the NOD32 Remote Administrator Console.**

The communication between the console and RAS takes place on TCP port 2223.

As soon as the communication is established, the title *Connected [name_of_the_server]* appears in the title.

1. In this section you can find more detailed information about the RA server to which the console is connected and also information about RA servers related to it (in case of replication).

**Attributes:**

- Clients – number of clients (workstations) connected to the server, or clients that were connected in the past and are registered in RAS database
- Oldest Version – the oldest version occurring on the workstations connected to t he RAS
- Least Recent Connection – value that was taken from a client workstation that has not been connected to the RAS for the longest time period.
- Last Virus Alert – number of virus alert messages sent from clients to their RAS.
- Last Events – number of events sent from clients to their RAS.

3) In the left part of this dialog window, there is a sensitive, adjustable filter displaying only the information that is interesting to the user.

3) In the bottom part of the dialog window, there is information retrieved from client computers. In order to get an overview, the information is displayed in tabs in the bottom part. The tabs Reports a Remote Install are exceptions; they serve for remote installation.

## Tabs in the bottom part of the console window

### Clients

In this tab, there is a list of clients (workstations with NOD32) that were connected to the RAS in the past. You can apply a filter on this tab – as well as on all other tabs (*Use filter* in the left part). The client workstations can be divided into groups using the menu *Edit / Groups* and by applying the division into groups using the filter.

Clients – computers with NOD32, that have logged to the RAS for the first time, are in a state *Yes* with the attribute *New*, that can be seen in the bottom-right part of an icon in a shape of a small monitor. This feature serves only for easier orientation of the administrator, who can thus quickly find out that there is a client computer which has not been "cared for". The attribute can also serve for other differentiations – it is up to the administrator.

At the time when the administrator sets up the client workstation as necessary through RAC (places it in a group, etc.), the administrator can place it into "already registered"

by using the right button of the mouse and by choosing the feature *Reset "New"* Flag. The icon will change to this:

The attribute *Comment* is selectable in all of the tabs. It serves for inserting the administrator's comments (for example alternative name of client workstation).

The attribute *Primary Server* denotes the name of the RAS, to which the remote client is connected via NOD32 Control Center. If it is another server than the one which the administrator is currently connected to, then it is a result of replication. *Version* is the current version of the NOD32 antivirus system on the client workstation, and *Last Connect* is the time of the last connection of NOD32 on the workstation to the RAS server. According to the settings of the console, time is either relative (e.g.: "20 seconds ago") or absolute (e.g.: 12:56:13). If there is an older version on the workstation, the data field is in a different color (again, depending on settings of the console), but it does not inevitably mean a problem (for example, in case the workstation has been shut down for a week – it can be seen in *Last Connect*).

The attributes *Last Virus Alert* (infiltration detected by the AMON, IMON, and EMON… modules) and *Last Event* (error event) display the last event of that type on the chosen client workstation. The events checked by the administrator can be removed from the list. Click right mouse button and select the *Clear "Last Event" Text*, or *Clear "Last Virus Alert" Text* option.

To switch the tab with automatic filter to display only records belonging to a chosen client computer, click the left mouse button on the corresponding cell in the column *Last Virus Alert or Last.*

### Other attributes:

*AMON* – status of the AMON module on client workstation.

*Configuration* – using the console (by the *Configuration* option in context menu) you can retrieve a configuration of a remote client workstation. In case the client is not present directly on the server, to which the administrator is connected with the console, configuration can be retrieved by clicking on the *Request* button. The configuration can be viewed by selecting the *View* option or saved by clicking on the *Save As* button. Click on the *New Task* button to create a new task. The attribute *Configuration* also informs about the state of import of the configuration. You can view status (*Ready*- import finished or *Requested*-request to import), last request for configuration – from the view of the administrator using console, but also from the view of a user on a client workstation.

*IP* – last known IP address of client workstation.

*OS* – operating system on client workstation.

*Mobile User* – if the *Mobile User* option is turned on (*Yes*), then the workstation will be updated (the *Update Now* task) as soon as the client workstation connects to the console (see interval defined by the NOD32 Control Center settings). This attribute can be enabled by the *Set "Mobile User" flag* option using the right mouse button context menu. It is recommended to use the *Mobile Server* if you connect to the network with a notebook computer. The NOD32 Antivirus System update is performed immediately afterwards.

### *Alert Log*

Alert log contains information about infiltrations detected by the AMON, EMON, IMON, and other modules. Click left mouse button to gain more information about the alert. The displayed information can be filtered too.

***Attributes:***

*Event Id* – log identification number.
*Client Name* – name of client workstation.
*Primary Server* – name of RAS to which client is connected via NOD32 Control Center (related to replication).
*Date* – date and time of the event (when it happened – according to time on client workstation).
*Received* – date and time of receipt by the server.
*Module* – name of the module that created the event.
*Object* – type of infected object.
*Virus* – name of virus.
*Name* – name of infected object, sector, or information about e-mail.
*Action* – action performed.
*Info* – contains supplementary information.
*Log Details* – information about the log accessibility in relation to replication.

### Event Log

Event log contains information about an event other than the virus. The report can be filtered to display only information you need – for example with the tick boxes in *Type of Event Log*. To get more detailed information about an event, click left mouse button on the event.

***Attributes:***

*Alert Id* – log identification number.
*Client Name* – name of client workstation.
*Primary Server* – name of RAS, to which is client connected via NOD32 Control Center to RAS (related to replication).
*Date* – and time of the event (when it happened).
*Received* – date and time of receipt by the server.
*Module* – name of the module that created the event
*Type* – type of log.
*Event* – description of event.

### Scan Log

Scan Log contains reports that were performed by the NOD32 on-demand scanner (antivirus test), which was planned in the Tasks tab, or started directly on the client computer. Click left mouse button to gain more detailed information about the performed test, or request for the details if servers in your network are replicated. (See chapter on RAS configuration).

***Attributes:***

*Scan Id* – log identification number.
*Client Name* – name of client workstation.
*Primary Server* – name of RAS to which client is connected via NOD32 Control Center to RAS (related to replication).
*Date* – date and time of event (when it happened – according to time on workstation).
*Received* – date and time of receipt by the server.
*Description* – contains supplemental information.
*Scanned* – number of scanned files.
*Infected* – number of infected files.
*Cleaned* – number of cleaned files.
*Status* – status of task completion.
*Log Details* – information about the log accessibility in relation to replication.

### Tasks

The *Tasks* tab contains information about tasks planned in the past (more details in the chapter on Tasks).

***Attributes:***

*Task Id* – task identification number
*Type* – type of task
*Name* – name of task
*Date To Deploy* – date and time of assigning to target client computers
*Date Received* – date and time of the client computer response
*Description* – note added by administrator to describe the task.
*Configuration* – information about accessibility to current configuration

Click left mouse button on the task to get more detailed information, especially in the *Details* tab. In the *Details* tab you can find a list of client computers (the attribute *Client*), which were assigned the task, and current state (the attribute *State*) of the task. This attribute has one of these values:

- *Waiting*

  A task is waiting on RA server to be sent to the client computer (target workstation). There can be one or two reasons for this – for example, the client workstation is shut down, or the NOD32 Control Center has made no contact to the RA server yet (by default it connects in five minutes intervals).
- *Done*

  Task has been assigned to the client computer – the target workstation. It does not necessarily mean that the task has been performed by the target workstation yet.
- *Pending*

  Task is being performed.

### Reports

The *Reports* tab serves for creation of statistical information – reports. Reports can be planned (for example once a week) or performed on demand (generated on administrator's command).

Individual variants of reports can be selected in the menu *Report / Type. Report / Style* determines graphical

interface of the resulting report (*NOD32 Scheme* is more graphically-demanding).

In the *Filter* section you can choose what clients (*Target Clients*), or viruses (*Viruses*) will be included in the report.

Other details can be set by clicking on the *Additional Settings* tab. It applies mostly to data in the heading and in the types of the diagrams used. At the same time, you can filter the client computers according to states of chosen attributes, and you can also choose the format of the output file (HTML, CSV).

In the *Interval* tab you can define an interval, for which the report will be generated:

- *Current*

Only events that took place in a chosen time period will be included in the report – meaning the same as now (e.g.: if a report is created on Wednesday and the interval is set to *Current Week,* then the events from Sunday, Monday, Tuesday, and Wednesday will be included).

- *Completed*

Only events that took place in a chosen, closed period will be included in the report (for example the whole of August, a whole week – from Sunday to next Saturday). If the parameter *Add also the current period* is active, the period chosen above will also include events from the last closed period until the moment of creating.

Example:

- We want to create a report including events from the last calendar week, i.e.: from Sunday to next Saturday. We want such report to be generated on the next Monday (after Saturday).

In the *Reports / Interval* tab, choose *Completed* and set *1 Weeks*. Remove *Add also the current period*. In the *Reports / Scheduler* tab, set *Frequency* to *Weekly* and choose *Monday*. The other settings can be set according to request of the administrator.

- *From / To.* Use this setting to define a period for which the report will be generated.

Click on the *Scheduler* tab to define and set up an automatic report in chosen time or intervals (*Frequency* section).

Enter time and date, when the report will be generated to the *Run at* tab, and in the *Store the Result to* section *(*the *Select Target…* button, specify how the report will be exported. The report can be sent via e-mail to a chosen address, or exported to a folder. A report can be exported, for example, to a folder that is accessible via intranet. Then it can be shared by all employees.

To send generated reports via e-mail, you need to set the SMTP server and sender address as described in the chapter "RA Setup".

To define the time period when generating will be active, go to the *Range* section. You can define the number of generated reports (*End after*), or a date of the last report (*End by*).

To save the settings of a defined report to a template, click on the *Save or Save as* buttons. When creating a new template, click on the *Save As* button and give the template a name.

In the upper part of the console window, you can see names of templates that were already created. Beside the template names, there is information about time/intervals, when the reports are generated according to the preset templates. Click on the *Generate Now* button (either in upper part, or in context menu – by clicking right mouse button on chosen template) to generate a report at any moment regardless of the schedule.

Already generated reports can be viewed in the *Generated Reports* tab. With the context menu options you can perform other operations with reports.

Favorite templates can be placed in the left window *Favorites,* and thus you can later immediately generate reports from favorite templates. To move a template to *Favorites* choose *Add to Favorites* in the context menu in the list of the scheduled templates.

This is a list of report types:

*Top Viruses* – list of the most frequently detected viruses

*Top Clients with most Alerts* – list of the most "active" client workstations (in number of detected viruses)

*Alerts Progress* – progress of virus events (number)

*Alerts Comparative Progress* – progress of virus reports by chosen viruses (using filter) compared with the total number of viruses.

*Alerts By Module* – number of virus alerts from the individual NOD32 modules.

*Alerts By Object* – number of virus alerts according to the way they attempted to infiltrate (emails, files, boot sectors).

*Combined Top Clients / Top Viruses* – combination of the above mentioned types.

*Combined Top Viruses / Alerts Progress* – combination of the above mentioned types.

*Combined Top Viruses / Alerts Comparative Progress* – combination of the above mentioned types.

*Clients Report, Alerts Report, Events Report, Scans Report, Tasks Report* – typical reports that can be viewed in the Clients, Alert Log, Event Log, Scan Log or Tasks tab.

*Comprehensive Report* – summary of these types:
Combined Top Clients / Top Viruses
Combined Top Viruses / Alerts Comparative Progress
Specified Alerts Progress

### *Remote Install*

This tab offers several variants of remote installation of the NOD32 Antivirus System on workstations and related features. More detailed information can be found below.

## RA Configuration

### License keys (.LIC files)

NOD32 Remote Administration (or NOD32 Enterprise Edition package) is delivered with a license key – a file with .lic extension. In this case the key must be copied into the folder *C:\Program Files\Eset\RA\Server*, which is done automatically during installation of the server part. Later manipulation of the license key has to be done manually. The license key file must always have .lic extension.

The license file contains information about expiry date and extension of the NOD32 Remote Administrator product license. The license file in fact determines functioning of NOD32 Remote Administrator as a product.

RAS reads information from .lic files when starting the nod32.exe service, and then every 60 minutes. If there are more license keys in the folder *C:\Program Files\Eset\RA\Server*, then RAS will choose the most appropriate (more detailed information can be found in the file *nod32ra.log*). If the license key has expired, NOD32 Remote Administrator will run in demo mode, i.e.: number of clients will be limited to two. If there are more clients than is defined in the license key (purchased), only a limited number of clients, corresponding with the defined number, will be displayed.

From the version 1.0.11 license key can be changed remotely on RA server via RA console. It is possible in the menu *Tools/ Server options – Renew License…* button.

***Note: Should you have any problems with application of license keys, please look in the file C:\Program Files\Eset\RA\Server\nod32ra.log where you can find the exact reason for the failure.***

## RA server configuration

To configure RA server, connect RA console to it (for example in the menu *File / Edit Connections…*) and then select *Tools/Server Options…*

### General Tab

Information on server part of RA Curent NOD32 ver. attribute is taken from NOD32 for Windows that physically runs on the same machine as RA server. This version is considered to be up-to-date and determines the currentness of the stations (meaning that the older versions differ from these ones in colors).

With Change password button it is possible to change or set the password for RA server. From the version 1.0.11 the button Renew License is available. It gives the option to change license key on RA server.

### Database Maintenance Tab

Here you can set RA server behavior in connection with database maintenance.

Following options will influence how many (X) events for each station should be saved in event log and scan log tabs. The oldest ones will be deleted.

*Only keep the latest X events for each client*

*Only keep the latest X scan logs for each client*

*Delete clients not connected for the last X months* – the workstations that has not been connected to RA server for more than X months will be deleted from clients tab (usually the ones that do not exist in LAN)

Following choices will influence how the old events should be deleted from the *alert log, event log* and *scan*

*log* tabs. Events older that X months will be deleted.

*Delete alert logs older than X months*

*Delete event logs older than X months*

*Delete scan logs older than X months*

*Clean up every X minutes* – settings above will be applied every X minutes.

When deleting events (by administrator or functions described above) no physical cleaning directly from the database file is done. To clean the events directly from the database (this will compact the size of database file), it is necessary to set the following option:

*Compact every X (days, weeks, months)*

During this activity the service of RA server is temporarily stopped (for maximum few minutes) till the database is "cleaned". In this time the RA server will not be able to accept console requests and workstation information. Therefore it is no recommended to do this activity too often and during the heavy traffic.

## Loggig Log

*Enable logging* – enables logging of RA server events

NOD32 RA server is able to log to the file (*Log filename*), whereas the size of this file can be restricted (*Rotate when greater than*). If it greater, it is rotated. In Log verbosity part it is possible to set the verbosity of log events.

At the same time it is possible to enable log to OS application log (*Log to OS application log*) or enable log over database (not recommended).

## Replication Log

*Replication „to" settings*

*Enable „to" replication* – enables replication – described in "Large Hierarchical Networks" chapter.

*Upper server* – the address (IP or according to DNS) of superior RA server to which the data replication from just configured RA server will be applied. From the picture in "Large Hierarchical Networks" chapter it is obvious what should be written in this column, see upper server attribute.

*Replicate every XX minutes* – replication frequency (every XX minutes)

*Replicate Up Now* – instant application to chosen upper server

Checkboxes on the left part enable to define log types (alert, event, scan), which can be replicated (transferred) to superior RA server on administrator's request. Checkbox in the right part enables defining if this should be done automatically (*Automatically replicate ...*). It is not necessary to activate automatic log replication. Administrator can request them individually from inferior server any time. Thus the transmission band among RA servers can be partly saved.

## Replication „from" settings

*Enable „from" replication* – ticking this option in Allow servers column allows to define RA servers (their name), from which the RA server will accept replication requests. Higher number of servers can be separated by commas.

Standard replication runs on TCP 2846 port, thus it can be changed (on inferior server directly in this tab, on superior – upper server in *Other Settings* tab).

## Other settings Tab:

*SMTP settings*

*Server* - SMTP Server address, through which the reports will be sent, or requests for remote installation via email

*Sender address* - e-mail address which will be set as the „sender" in outgoing e-mails.

*Allow new clients* – Clients are, by default, added to the list (the Clients tab in console) automatically at the moment when RAS registers the first attempt to establish connection from a new, so far unregistered client module of NOD32 Control Center. Ticking this option enables automatic adding of new clients to the clients list. If you leave this option unchecked, automatic adding will not be enabled. The setting does not apply to new clients, which were added to the clients list from child servers by replication.

*Automatically reset "New" flag by new clients* – defines whether a newly added client will be marked by the attribute *New* or not (turned off = the attribute *New* assigned). More detailed information can be found in the chapter "Clients".

In the lower part numbers of ports where the RA server will "listen" can be changed.

We recommend keeping original port numbers on server and client part parts.

## RA console setup

The console can be configured in the menu *Tools / Console Options…*

### *Columns – Show / Hide* tab:

Here you can define, what attributes should be displayed in individual console tabs.

### *Colors* tab:

Here you can define what colors will be assigned for what events.

*Clients: Previous Version* – color of previous virus signature database (compared with current)

*Clients: Older Version or N/A* – color of older virus signature database (compared with current), or color of unknown database.

*Clients: Last Connected* – color of client which was not connected for the longest time. This option can be set.

*Clients: Last Virus Alert* – color of last virus event.

*Clients: Last Event* – color of last event – other than virus event.

*Clients: AMON Stopped* – color assigned to client with AMON turned off.

*Event Log: Diagnostic* – color of events classified as "Diagnostic".

*Event Log: Warning* – color of events classified as "Warning".

### *Paths* tab:

Here you can specify a directory to which the console will locally save reports downloaded from RAS. By default, it is the directory relative to CONSOLE.EXE, strictly speaking .*Reports*.

### *Other Settings* tab:

*Appearance of the date/time columns*

Time display format.

*Absolute* – console will display absolute time (e.g.: 14:30:00).

*Relative* – console will display relative time (e.g.: 2 weeks ago).

*Regional* – console will display time according to regional settings (taken from the Windows settings).

*Recalculate UTC time to your local time (use local time)* – Check this checkbox to recalculate to your local time. Otherwise, GMT – UTC time will be displayed.

***Other settings***

*Auto Apply Changes* – filter automatically selects appropriate data as soon as any change is done (except the change of defined client name or server)

*Use automatic refresh X* – automatic data refresh in a current folder and in chosen interval (X minutes).

*Empty console recycle bins at application exit* – click to remove items from internal recycle bin of the console after finishing working with it. You can select it in the *Reports* tab.

*Show gridlines* – click to separate all individual cells of all tabs by gridlines.

*Use systray icon* – console will be represented by a Windows system tray icon.

*Show on taskbar when minimized* – defines if the consol should be minimized on the Windows taskbar.

*Use highlighted systray icon when problematic clients found* – use this option, together with the *Edit* button to define events, which will trigger a change of the systray icon color. So if, for example, you minimize the RA console program, by the change of color you will see that a new problem has occurred.

In a larger network, with more workstations, these features will come in handy:

Selection of more records can be performed, for example, by pressing the CTRL key and left clicking on the selected items, or in a similar way, but with the SHIFT key. Press the key combination "CTRL" and "A" to select all workstations.

### Groups

Individual clients can be placed in groups using the *Edit / Groups* feature from the console menu. Placing into groups can be used to filter or to create tasks, since the tasks can be applied to the whole group. The groups are independent to each server – they do not replicate.

### Filter

Filter is used to display only records that are important for the administrator to know. Filter can be enabled by the option *View / Show/Hide Filter Panel* in the console menu.

To activate filter, check the *Use Filter* checkbox and click the *Apply Changes* button to start the filtering. In the first section – *Computer filter criteria* you can filter servers / clients in several ways:

*Only clients (whole word)* – Only those clients whose name corresponds to a word thread you typed in will be included in the output.

*Only clients like* – Only those clients whose name contains a thread you typed in will be included in the output.

*Exclude clients (whole word)* – The opposite of *"Only clients (whole word)"*.

*Exclude clients like* – The opposite of *"Only clients like"*. In the next section, you can limit filtration by the *Groups* division.

*Clients in Groups* – In this case, only clients belonging to defined groups will be selected.

*Clients in other Groups or N/A* - Only clients belonging to other than chosen groups, or not belonging to any group will be included in output. If a client belongs to some of the chosen groups, but also in a group that was not selected, then this client will also be included in output.

*Clients in no groups* - Only the workstations not belonging to any other groups will be chosen.

The other filter settings differ depending on the active tab, but mostly it is only a variation of the time filter that can limit outputs only to records that were created in a certain time period.

### Context menu

Click the right mouse button on the event list to bring up a menu that enables applying other features to effectively filter events. These are the options:

*Select by 'aaa'* – Only records containing thread *aaa* in the same attribute (column), where the context menu has been brought up will be selected. Thread *aaa* will be automatically replaced by the value from the cell, where the context menu has been brought up.

*Inverse selection* – Inversed selection will be performed.

*Hide selected* – Hides selected items.

*Hide unselected* –Choose this option to hide items that were not selected.

The two last options can be suitably applied after you have used the previous options. Filters set by the context menu can be canceled in the menu *View / Cropped View*, or by console tray icon. Or, alternatively, press F5 (shortcut to refresh).

***A Practical Example:***

- We want only those workstations with some virus event to be displayed:

Click the right mouse button in the *Clients* tab on any of the *Last Virus Alert* empty cells and choose *Select by* '' from the context menu. Now, in the context menu bring up the *Hide selected* feature.

- We want to display virus events only from the workstations *George* and *Edward*.

Click the right mouse button on any cell with the text "George" in the *Client Name* column in the *Alert Log* tab. In the context menu choose *Select by 'George'*. Now press and hold the CTRL and in a similar way (with the right mouse button and by selecting *Select by 'Edward'*) select 'Edward'. Click the right mouse button and choose *Hide unselected* from the context menu. Release the CTRL key.

At the same time, together with the left mouse button, you can use the CTRL key to select/unselect chosen items, as well as the SHIFT key to select/unselect a group of items.

## How to use the console more effectively

### Export

Data from the tabs *Clients, Alert Log, Event Log, Scan Log* and *Tasks* can be (even after filters have been applied) exported to a file using the option *Export* in the *File* menu. Or, alternatively, by the option *Export Selected* – only selected records will be exported.

Data can be exported to different file extensions. We recommend exporting to an HTML, or to a CSV file (the file can be edited, for example, in MS Excel after that), where individual attributes are separated by commas (*comma delimited*) or by semicolons (*semicolon delimited*).

### Print

Similarly, data from the tabs *Clients, Alert Log, Event Log, Scan Log, Tasks* can be printed.

First of all, configure page setup in the menu *File / Page Setup*. In the section *Mode* you can choose, whether the page will be printed in mode *WYSIWYG* ("what you see is what you get"), or in grayscale.

In the section *Tables* also choose whether eventual graphics will be printed (PC symbols, etc.) To set page headers and to browse and enable printing of a logo (e.g.: of a company) do to *Headers and Footers*.

Click *Preview* to view the final appearance of the page (as well as with the option *Print Preview* in the menu *File)*.

### Deleting unnecessary data

To effectively remove old and unnecessary data in the tabs Alert Log, Event Log, Scan Log, and Tasks, choose the *Edit / Delete special…* option. Click *Specify Date* to define what data should be removed. Automatic removal of specific data is provided in options in Database Maintenance tab.

### Maintenance and backing up of NOD32 Remote Administrator Server

We recommend keeping the RAS database up to date and deleting old records in order not to overburden the system unnecessarily. It applies mostly to data in the "Alert Log" tab. To delete unnecessary data, use the feature described in *"Deleting unnecessary data"*.

What is relevant to saving information: all data is saved in the file *nod32ra.mdb,* which is usually located in the folder *C:\Program Files\Eset\RA\Server*. It can be stored in case of server failure (when saving, please stop the NOD32 service – required).

Details from individual logs (for example NOD32 on-demand scanner logs) are stored into the subdirectory *Storage*. Also client configurations and reports in xml extensions can be found there.

chapter 3:

# Remote installation

## Introduction

The product NOD32 Remote Administrator enables remote installations of NOD32 for Windows to workstations in a network.

Remote installation can be divided into two parts:

- Creation of installation packages and their configuration
- Export to remote workstations. In the NOD32 Remote Administrator console, navigate to the *"Remote Install"* tab. This tab deals with remote install.

NOD32 Remote Administrator offers two basic ways of how to install NOD32 for Windows remotely:

- Push installation, where the installation is "pushed" to remote workstations directly on administrator's command. This is possible only assuming that there is a Windows NT based operating system installed on workstations (NT4, 2000, XP. . .).
- Installation using the short installer *nod32installer.exe*, exported to workstations in a logon script or in an e-mail. To install the program, run *nod32installer.exe* on a client workstation. This type of installation can be used on computers with all versions of Windows (beginning from the version 95).

Minimal requirements for successful remote installation:

- Operation of a client workstation in Microsoft network
- Operation of the files and printers sharing (+ exception in integrated firewall in Windows XP)
- NT systems: knowledge of username/password with administrator rights on given workstations. Without it the remote installation cannot be performed
- At least these ports should be available on RA server: 2222 (communication of NOD32 for Windows with RA server), 2223 (communication of RA console with RA server), 2224 (feedback to RA server during remote installation).
- Accessibility of client on the level of "network places" towards RA server
- Defined administrator account password in NT systems (the remote installation is not possible without defined administrator account password)
- With Windows XP it is required to disable the option "Use simple file sharing". To disable this option, go to Control panel/Folder Option

In both cases, TCP/IP connection between target workstation and RA server is established on port 2224. That's why a properly configured TCP/IP protocol is among minimal requirements for a successful installation.

For the NT based systems it is necessary to provide:

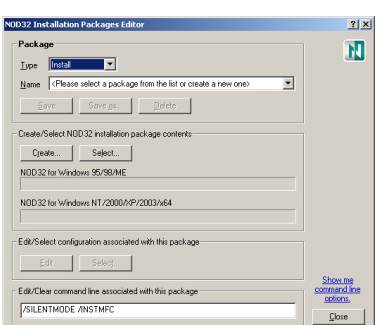
- operation of a client workstation in Microsoft network,
- operation of the file sharing service,
- operation of these services: *Remote Registry Service*, *Remote Service Manager*.
- username and password with administrator rights for all workstations. Remote Install is not possible without username / password of a user with administrator rights to all computers – without it, installation cannot be performed.

Especially on computers with the MS Windows XP operating system, it is required to disable the option *"Use Simple file sharing"*. To disable this option, go to *Control Panel / Folder Options . . .* in the *View* tab.

In Windows registry, it is: *HKLM\SYSTEM\CurrentControlSet\Control\Lsa*

- the *forceguest* item. Set its value to *0*.

***Note: NOD32 can be installed remotely also without using NOD32 Remote Administrator. More details in the chapter 2.***



## Remote Installation Process

### How to create and configure installation packages

First of all, create installation packages – files with *.nip extension, or installers for specific workstations (according to their operating system) with a preset configuration.

To do it, click on the *Packages* (the *Manage Packages* section) button in the *Remote Install* tab.

In the *Create/Select NOD32 installation package contents* section, create (clicking on the *Create* button), or choose already existing (the *Select* button) "content" of package. If you run the program for the first time, choose *Create*. In the *Source* section, browse for NOD32 installer (in a form that can be also downloaded from the Internet – to navigate to the Eset website, click on the *Download* button), or for the file *update.ver* from the update copy (mirror).

In the *Package* section, define where the content will be saved. By default it is set to *Server*, or the PC where the RAS service is running. Or, alternatively, export the package to an EXE file. Click on the *Create* button to create. The console will automatically detect, for which version is which installation dedicated, and will distribute it accordingly.

It is recommended to associate a new package to a configuration that will be applied on remote workstations. To do it, navigate to the *Edit/Select configuration associated with this package* section. Click the *Select* button to choose an already existing XML configuration file, or create a new one with the *Edit* button. If you chose both Windows NT and Windows 9x workstations in the previous paragraph, then after clicking on the *Edit* button you have to decide which version of operating system it will be used (by default for the both). In the section *Edit/Clear command line associated with this package* you can define command line parameters, which will be used with the package. A summary of the parameters can be found below in the corresponding chapter.

## Export to remote workstations

### PUSH install method

It is a method where the installation is "pushed" to remote workstations directly on administrator's command. This is possible only assuming that there is a Windows NT based operating system installed on workstations (NT4, 2000, XP…).

Choose the workstations in the *Push Installation* dialog window (click on the *Install…* button in the *Remote Install* tab) where NOD32 for Windows will be installed. To select a workstation, click the right mouse button and select *Copy to Remote List*, or use the *drag & drop* method in the left section (*Network places*). To get current information from a workstation, click the right mouse button on it and select *Get Info* (in the *Remote installation* section). Similarly, you can start remote installation itself (the *Install* option), or uninstall (the *Uninstall* option). **To apply the installation, select a "package" in the pull down menu, and select workstations (press CTRL or SHIFT and click the left mouse button to select more workstations).**

The console may ask for administrator's username and password for this situation. Please specify whether the workstation is located in a domain or in a workgroup.

### "Export to logon script" and "Send via E-mail"

These two methods are almost similar. They differ only in the way the file *nod32installer.exe* is sent to target workstations.

In case of the version *"Export to logon script"*, select *Package* in the section *Installation location*, define the directory where the file *nod32installer.exe* will be located, or edit the path to the parent directory "from the point of view" of remote workstations (the item *Share*). It is required to enable access to the directory for the remote workstations.

In the section *Script location*, select a directory where the logon script to be edited is located.

All corresponding files in the directory will be displayed according to the mask in the *File(s)* section (including logon scripts). Now also select files into

which a line providing installation (or uninstallation) of NOD32 on remote workstations will be inserted. Click on the *EDIT* button to edit the file in the user-friendly internal editor. Click on the *SAVE* button to confirm the changes made.

*HINT:* Alternatively, you can choose your own way, outside the console. Copy the file *nod32installer.exe* from the RA server from corresponding package and install it in your own way. It is located in the directory: *C:\Program Files\Eset\RA\Server\packages\{package_name}*.

Variant *"Send via E-mail"* naturally sends the file *nod32installer.exe* via e-mail. After running the email attachment, either remote installation or remote uninstall of NOD32 for Windows will start.

During the installation, again choose the required *Package* and select addresses, where the file *nod32installer.exe* shall be sent. It is also advised to define *Subject* (of e-mail) and *Body* (of e-mail).

For the RA server to work properly, it is required to set the SMTP server address and sender e-mail address. In case this information is not available, the e-mail can be sent using the Microsoft Outlook application (Outlook Express is not supported).

*HINT:* Alternatively, you can choose your own way, outside the console. Copy the file *nod32installer.exe* from the RA server from corresponding package and install it in your own way. It is located in the directory: *C:\Program Files\Eset\RA\Server\packages\{package_name}*.

## Other information

### Remote install in detail

In this chapter you can find more detailed information about the remote install process. In the case of a Push installation, the following operations take place:

1) RA server contacts a remote workstation and attempts to authorize by username and password, entered by the administrator from the RA console.
2) If successful, the RA server connects to the workstation using share *ADMIN$* and starts copying the file *nod32installer.exe* belonging to the installation package.
3) The file *nod32installer.exe* is started as a service and executed.
4) After that *nod32installer.exe* contacts the RA server on port 2224 (TPC). For RA server this is a signal for corresponding installation package again via share *ADMIN$*
5) When the download finishes successfully, the installation of the package starts, together with predefined attributes. Installation package is on the machine unpacked and started using SETUP.EXE together with attributes defined in given package. Thanks to NOD32.XML the setting defined by configuration editor NOD32 (more in chapter 2) will be applied.

In the case of the variant *"Export to logon script"*, or *"Send via E-mail"*, the process starts with the running of the file *nod32installer.exe* (either manual – by user, or automatic, e.g.: from logon script). Then these operations take place:

1) The file *nod32installer.exe* is started as a service and executed.
2) After that nod32installer.exe contacts the RA server on port 2224 (TPC). For RA server this is a signal for corresponding installation package again via share *ADMIN$* .
3) Access via share *ADMIN$* and to remote installation uses information defined in RA console by the administrator in *Remote Install* folder, with the *Log on…* button (*Set Default Logon for E-mail and Logon Script*).
4) When the download finishes successfully, the installation of the package starts, together with predefined attributes. Installation package is on the machine unpacked and started using SETUP.EXE together with attributes defined in given package. Thanks to NOD32.XML the setting defined by configuration editor NOD32 (more in chapter 2) will be applied.

### The file nod32installer.exe

The file *nod32installer.exe* is an installer that will prepare NOD32 for Windows for remote install.

After executing, it is installed as a service. It can perform the following tasks as well:

- Check, whether there is NOD32 for Windows already

installed on workstations. If yes, it will not attempt to install it again.
- Run the installation of NOD32 for Windows under an administrator account. All data is sent from the RA console, or the file *nod32installer.exe* receives them from the RA server.
- Uninstall NOD32 for Windows from workstations.

Each new package created in the RA console has its own *nod32installer.exe*. Internal information in this file is related to the package and RA server.

Address of RA in the files *nod32installer.exe* is usually defined during the expert installation of the *NOD32 Remote Administrator Server* product. In case this address was not specified, the file is given a default name – i.e.: name of the PC where RAS is installed.

The file *nod32installer.exe* can be installed with the following parameters (without slash "/"):

*MODE*= defines whether it is installation of NOD32 for Windows (value 1), or uninstallation (0)

*SERVER*= name or IP address of RA server, from which the NOD32 installation package will be downloaded.

*PORT*= port to which a request for sending NOD32 installation packages will be sent

Since *nod32installer.exe* runs in a totally silent mode, and no information about problems with installation is displayed, the installer creates a log that is saved in the file *C:\nod32installer.log*. It contains information about the most important operations.

At the same time, *nod32installer.exe* creates a key *_LOCAL_MACHINE\Software\Eset\NOD32 Remote Installer* in the Windows registry. This will prevent repeated installation of the same package, if previous installation was successful.

As it was already mentioned, nod32installer.exe can be started in any other way and does not have to be exported on workstations with NOD32 Remote administrator tools.

## Possible problems

### Error messages

As with every product, *NOD32 Remote Administrator* can return more detailed information about a problem that has occurred.

The error message is in many cases accompanied with its SC error code and GLE error code, e.g.:

*Could not set up IPC connection to target computer (SC error code 6, GLE error code 1326)*

SC codes mostly contain only internal information for easier orientation in the problem code, GLE codes are more important for the user. These are classic "Win32 Error Codes" – list of such codes can be found on this webpage: *http://msdn.microsoft.com/library/default.asp?url=/library/en-us/debug/base/system_error_codes.asp*

In this particular case, GLE error means, that a wrong or unknown password of the account (under which remote installation was to take part) was entered.

Quite often you can come across this message caused by *nod32installer.exe:*

*NOD32 Installer was told to quit by the server XXX*

It means that installation from the chosen client workstation was already performed (successful or not) and RA refuses to repeat it. This message keeps on occurring until the administrator deletes the message related to the workstation in *Remote Install* tab (by the *Clear* option, also accessible from the context menu after clicking the right mouse button), namely from:

– the bottom of the *List of pending and failed installations*,
– the Successful Install List tab.

Error message *NOD32 Installer could not connect to server XXX* means that RA server is not accessible for the file *nod32installer.exe*. We recommend to check, whether *XXX* can really be localized in the network (e.g: by *'pinging' XXX*), or whether the communication is not blocked by a firewall (port 2224 on RA server must be allowed).

Especially with MS Windows XP, you can come across other, already mentioned problems connected with the option *"Use simple file sharing"*. In this case, the error *"Access denied"* can appear already when using the *"Get Info"* option during the Push install.

### Overview of some other error situations:

*Could not set up IPC connection to target computer (SC error code 6, GLE error code 53)* - It is not allowed to share files or printers (possible exception on firewall - ports

445, 135 - 139), or the relevant station is not visible on the level of network places.

*Could not install NOD32 Installer onto target computer (SC error code 6, GLE error code 67)* - It is not possible to get to a workstation through share ADMIN$ (or it is a workstation with Windows XP Home, which does not support such system sharing)

*Could not retrieve required information from target computer (RES error code 13, GLE error code 997)* - Probably „Remote registry" service is not enabled at the station. If the RA server works on server with Windows 2003, the system account, under which the service NOD32 RAS is running, does not have the right to read registers on a remote system. In this case, it is necessary to define data of domain administrator's account (name and password) in the properties of NOD32 RAS service and restart the service (after the execution of remote installation we recommend to re-setup the system account).

*Could not set up IPC connection to target computer (SC error code 6, GLE error code 1327)* - The password of administrator cannot be empty.

*Could not set up IPC connection to target computer (SC error code 6, GLE error code 1326)* - „Use simple file sharing" function is enabled.

*Could not set up IPC connection to target computer (SC error code 6, GLE error code 51)* - „Server"system service is not enabled on the workstation.

*Failure during NOD32 uninstall - exit code: 207* - For uninstall it is required to define a password. In the uninstall package it is required to define a parameter / PWD="password"

## Possible error messages produced by the NOD32 workstation

The error messages can be produced directly by the installer, which is used with all Eset MS Windows based products (i.e. the installer launched by the file SETUP.EXE, or after running the installation package downloaded from the Eset company website).

| Error | Meaning |
|---|---|
| 101 | administration rights required |
| 102 | no configuration file specified |
| 103 | lack of memory |
| 104 | old version of the Operating System |
| 105 | cannot create a temporary folder to extract the installation files |
| 106 | error extracting files |
| 107 | *internal program error* |
| 108 | attempting to overinstall with an older component |
| 109 | *internal program error* |
| 110 | *internal program error* |
| 111 | cannot create a file on the disk |
| 112 | *internal program error* |
| 113 | *internal program error* |
| 114 | SETUP.XML corrupt or missing |
| 115 | the current version not compatible with the old version (you need to uninstall the old version) |
| 116 | error writing to the operating system registry |
| 117 | upgrade required |
| 118 | attempting to overinstall with a different language version (uninstall the previous version first |
| 119 | corrupt uninstall file |
| 120 | registering service error |
| 121 | component installation error |
| 122 | cannot install a certain component to the computer |
| 123 | attempting to install the trial version again error |
| 124 | wrong Operating System, the installer is intended for the Windows NT/2000/XP/2003 Operating System |
| 125 | wrong Operating System, the installer is intended for the Windows 95/98/ME Operating System |

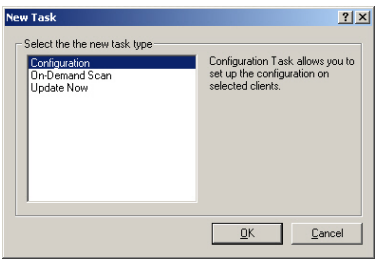
To find out the exact reason why the installation failed, run the install file (i.e.: the SETUP.EXE file) with the /TEST parameter (i.e.: SETUP.EXE /TEST). The detailed description of the installation progress will be saved in the NSETUP.LOG file.

chapter 4.

# Tasks, typical examples

## Introduction

NOD32 Remote Administrator enables the administrator to create tasks and apply them to remote client workstations with NOD32 for Windows.




Using the RA console you can create three types of tasks:

- "Configuration" – to make changes in configuration of remote client workstations.
- "On-Demand Scan" – to run an antivirus scan on remote client workstations.
- "Update Now" – to immediately update remote client workstation.

To run the planner wizard, press the key combination CTRL and N, from the menu *File / New Task*…, on the icon tray, or from context menu on the chosen workstation (in this case, some dialog windows may be omitted – for a complete set, we recommend other ways of running the wizard.)

## Tasks in detail

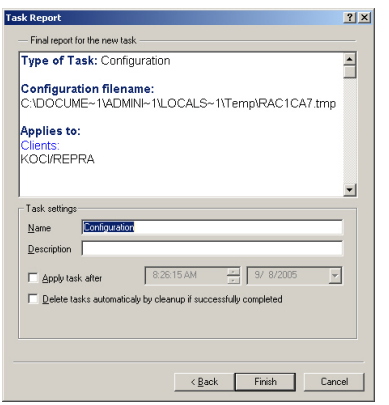
### Configuration task – changes in configuration

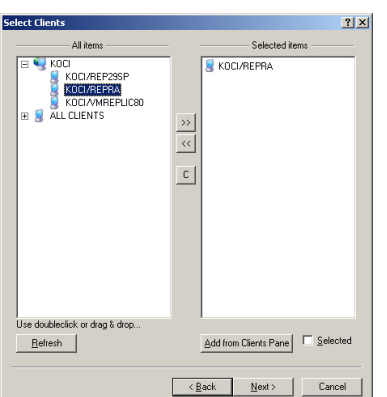
To apply a configuration task, i.e.: apply a configuration on client workstations, first you must create (clicking on the *Create* … button), or choose an already existing (the *Select* … button) XML configuration file.

Configuration setup takes place in the NOD32 Configuration Editor – it is described in a separate chapter. We recommend to focus on the color distinction of small symbols in front of each attribute – they show whether the attribute will be applied or the original setting will not change. The selected configuration can be viewed (the *View* button), or changed (the *Edit* button).

Use the *Create from Template*… button to open an existing configuration and use it as a base for a new configuration. The original template will stay unchanged, even if you make some changes.

In the next step, please choose workstations or workgroups, to which you want to assign the configuration (those in the "Selected items" section). Click on the *Add*



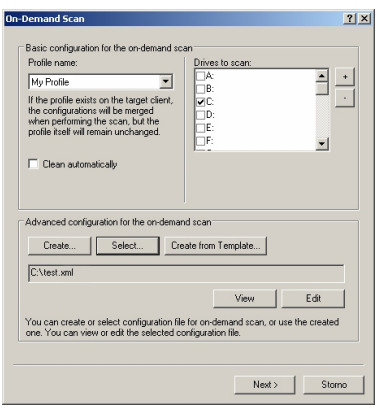



*from Clients Panel* to add currently displayed clients to the list from the "Clients" tab of the console. Check the *Selected* option to move only those clients which were picked up in the "Clients" tab.

In the final step, you can name the *task*, or add its *description*. This data serves only to help the administrator and for easier orientation. At the same time, you can delay the task (Apply task after), or provide its automatic deletion from the RA console after it has been successfully performed (Delete tasks automatically by cleanup if successfully completed).

To apply this type of task, first create (clicking on the *Create …* button), or choose an already existing (the *Select …* button) XML configuration file with a scanner configuration, which will be applied on remote client computers to start antivirus scanning

To setup the configuration file, open the NOD32 Configuration Editor. It is described in a separate chapter.




We recommend to focus on the color distinction of small symbols in front of each attribute – they show whether the attribute will be applied or whether the original setting will not change. The selected configuration can be viewed (the *View* button) or changed (the *Edit* button).

Use *Create from Template…* button to open an existing configuration and use it as a background for a new configuration. The original template will stay unchanged even if you make some changes.

In the upper section, choose a profile name from the "Profile name" pull-down menu. If this profile is found also on the target workstation, the above mentioned configuration will be applied together with a local configuration of the profile.

If you want to push a complete scanner configuration regardless of previous target workstation configurations, then press the key combination CTRL + A during creation of the configuration (or choose "Select all" from the menu "Edit").

To run the scan task in cleaning mode (not in the default one), check the *Clean automatically* option. The scanner will then take the action defined in the menu *NOD32 On-Demand Scanner / Profile / Scanner / If an alert is generated* in the above mentioned configuration file.

Next choose workstations, or workgroups, where the configuration will be applied (those in the "Selected items" section). Click on the *Add from Clients Panel* to add currently displayed client workstations from the "Clients" tab of the RA console. Select the *Selected* option to move only clients selected in the "Clients" tab.

And finally name the task, or add a description to it. These features serve only for easier orientation of the administrator, who can thus later quickly identify tasks. At the same time, you can *Apply tasks after*, or delete it from the "Tasks" tab of the RA console after it has been completed (Delete tasks automatically by cleanup if successfully completed).

## Update Now task

First, define the name of the current Update profile that will be applied on remote workstations. If you do not use update profiles for update, you do not need to choose any profile, you can skip to the next step.

Next choose workstations, or workgroups, where the configuration will be applied (those in the "Selected items" section). Click on the *Add from Clients Panel* to add currently displayed client workstations from the "Clients" tab of the RA console. Select the *Selected* option to move only clients selected in the "Clients" tab.

And finally name the task, or add a description to it. These features serve only for easier orientation of the administrator, who can thus later quickly identify tasks. At the same time, you can *Apply tasks after*, or delete it

from the "Tasks" tab of the RA console after it has been completed (Delete tasks automatically by cleanup if successfully completed).

chapter 5.

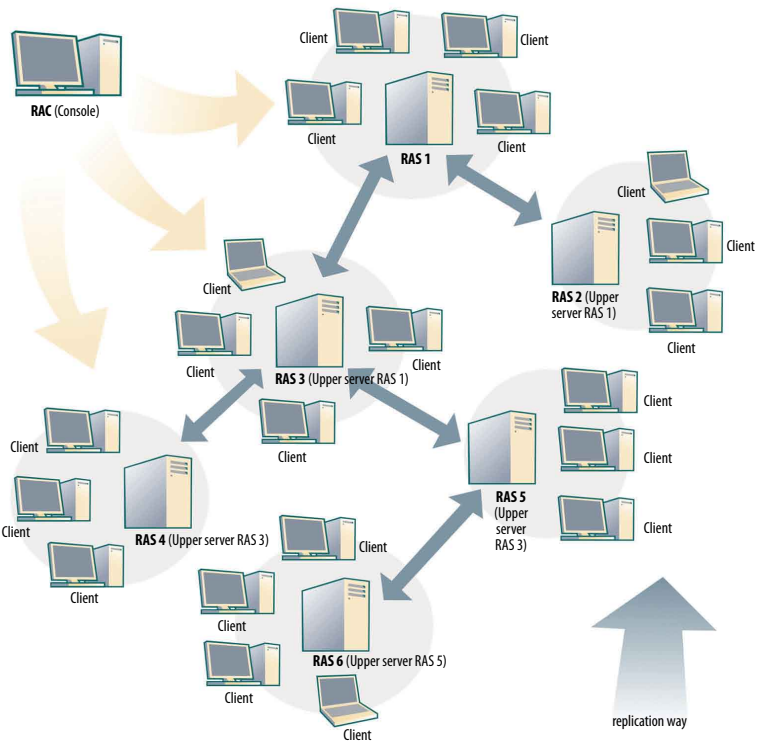
# Large hierarchical networks – replications

## Large networks

In large networks, you can install more RA servers for easier manipulation. The servers would create an imaginary structure. The burden connected with communication with client workstations and RAS can be distributed. This way you can also define sub-administrators who will control only a group of client workstations. All transfers between servers are encrypted.

A company department network is an example of a sub-network. It is recommended to install RAS for each department controlling client computers only within its own network, as seen in the next figure.

If, from the point of view of replication, RAS1 will be set as the main (root) server, then all the other servers are controlled by it. According to the figure, RAS3 is superior to RAS4, RAS5, and RAS6, as well as RAS5 is superior to RAS6 (superior = *"upper server"* in the scheme).



Networks consisting of superior / inferior RAS servers allows the administrator to only control those client workstations that can be momentarily accessed by RAS (using RA console) and eventually can control clients connected to inferior RA server(s).

So if the administrator connects using RA console for example to RAS3, he/she will be able to control client workstations connected to RAS3, RAS4, RAS5, and RAS6. If the administrator connects to RAS5, he/she will be able to control RAS5 and RAS6. And if he/she connects to RAS1, he/she will be able to control all workstations of course.

It leads to another idea – you can use more administrators to control only partial groups of client workstations (and which are connected to a certain RAS and to RA servers inferior to it).

What information will be retrieved from the client workstations connected to inferior RA servers is configured in the replication setup.

Replication is nothing else but a communication of RAS with superior RA servers. Its specific features are described in the chapter about the RA server setup.

### Mirror servers replication

This is not directly connected to NOD32 Remote Administrator, but you can replicate also updates on local mirror servers. Updates from the server can be distributed not only to the target workstations, but also to inferior servers – they will send them to workstations they control.

chapter 6.

# Summary of information

## This is a summary of the most important information:

- You can install either NOD32 for Windows – standard edition, or NOD32 for Windows – professional edition on the workstations.
- NOD32 for Windows – professional edition contains the Mirror feature.
- Mirror provides an update download from the Internet and distributes it to other workstations in the network.
- Mirror has two variations: as a shared folder, or as an HTTP server.
- Mirror, as an HTTP server, is simpler when it comes to its configuration.
- Using Mirror, you can distribute also configurations.
- You must modify settings in NOD32 Control Center/ Setup of Automatic Update for the workstations that will download updates from the Mirror to work properly.
- NOD32 for Windows can be installed with a predefined configuration.

There are different ways to do so:

- By a direct start with a parameter for XML configuration file application.
- By a call from a logon script as described above.
- By a call from a logon script using nod32installer.exe (NOD32 Remote Administrator console installation is required).
- By sending nod32installer.exe by electronic mail to client workstations (NOD32 Remote Administrator console installation is required).
- By Push Install – installation is "pushed" to the client workstation from the NOD32 Remote Administrator console.
- The NOD32 Enterprise Edition package includes NOD32 for Windows and NOD32 Remote Administrator.
- NOD32 Remote Administrator consists of a client (console – RAC) and a server part (RAS).
- RAC is installed to the administrator's workstation.
- RAS is installed to MS Windows NT based computers (NT4 / 2000/ XP / 2003), which should be working 24 hours a day.
- When installing RAS, browse for and add the license key, and be careful when entering the server name (if unsure, we recommend leaving the dialog box blank).
- The client workstations will automatically appear in the RA console assuming that you have enabled Remote Administration on the workstations and entered correct data (particularly the IP address). To set this option, go to *NOD32 Control Center / NOD32 System Tools / Setup / Remote Administration*.
- In NOD32 for Windows you can protect the configuration by a password to prevent unauthorized modification by users.